In the Claims:

1 – 30 (Canceled).

31. (Original) A method of illuminating a target comprising:

a) transmitting light from a light source to a proximal end of a light guide bundle via a spatial light modulator wherein the spatial light modulator transmits the light substantially only to cores of light guides in the light guide bundle;

b) transmitting the light from the proximal end of the light guide bundle to a distal end of the light guide bundle and emitting the light from the distal end of the light guide bundle; and,

c) illuminating the target with the light emitted from the distal end of the light guide bundle.

32. (Original) The method of claim 31 wherein the method comprises scanning a light beam across the spatial light modulator and simultaneously setting at least one pixel of the spatial light modulator that corresponds to a core of one of the light guides to an on-state to provide at least one on-pixel and setting other pixels of the spatial light modulator to an off-state, whereby the light beam is transmitted substantially only to the core of the light guide when the light beam contacts the on-pixel and the light beam is not transmitted to inter-core areas of the light guide bundle or to light guides adjacent to the light guide.

33. (Original) The method of claim 32 wherein the light beam is a laser beam.

34. (Original) The method of claim 32 wherein the method comprises scanning the light beam across substantially all pixels that are set to an on-state over time such that substantially all of the light guides in the light guide bundle are illuminated, thereby illuminating substantially all of the target within a field of view of the light guide bundle without moving the light guide bundle.

35. (Original) The method of claim 31 wherein the method comprises optically connecting the light source to the spatial light modulator such that the light

source illuminates a substantial portion of the pixels of the spatial light modulator, and setting selected corresponding pixels to an on-state and setting other pixels of the spatial light modulator to an off-state such that light from the light source is transmitted substantially only to the cores of the light guides corresponding to the corresponding pixels.

36. (Original) The method of claim 35 wherein the method comprises varying the selected corresponding pixels that are set to an on-state over time such that substantially all of the light guides in the light guide bundle are illuminated, thereby illuminating substantially all of the target within a field of view of the light guide bundle without moving the light guide bundle.

37. (Currently Amended) The method of claim 35 ~~or 36~~ wherein the method comprises selecting the selected corresponding pixels that are set to an on-state such that light emanating from the distal end of a first light guide corresponding to a first selected corresponding pixel does not substantially interfere with light emanating from the distal end of a second light guide corresponding to a second selected corresponding pixel.

38. (Original) A method of obtaining an image of a target comprising:

a) transmitting light from a light source via a spatial light modulator to a light guide bundle, then emitting the light from a distal end of the light guide bundle to illuminate the target and thereby cause light to emanate from the target to provide emanating light;

b) collecting the emanating light that contacts the distal end of the light guide bundle; and

c) transmitting the emanating light via the light guide bundle to a detector to provide an image of the target at the detector.

39. (Original) The method of claim 38 wherein the detector comprises an eyepiece ocular.

40. (Original) The method of claim 38 wherein the detector comprises a pixelated detector.

41. (Original) The method of claim 40 wherein the method comprises setting to an on-state pixels of the spatial light modulator that correspond to cores of corresponding light guides in the light guide bundle to provide on-pixels and setting to an off-state pixels corresponding to inter-core areas of the light guide bundle to provide off-pixels.

42. (Original) The method of claim 41 wherein the method comprises setting a plurality of selected groups of the on-pixels to an on-state wherein the selected groups are spaced apart such that light emanating from the distal end of a first light guide corresponding to a first selected group of on-pixels does not substantially interfere in the target with light emanating from the distal end of at least one second light guide corresponding to at least one second selected group of on-pixels, and substantially all other pixels of the spatial light modulator are in the off-state to provide other light guides.

43. (Original) The method of claim 41 wherein the method further comprises ignoring light emanating from the other light guides.

44. (Original) The method of claim 42 wherein the method further comprises evaluating the light emanating from the other light guides to provide out-of-focus data and the incorporating the out-of-focus data with the light emanating from the light guides corresponding to the on-pixels to provide an enhanced image.

45. (Original) The method of claim 38 wherein the method comprises transmitting the light past the spatial light modulator only in an illumination light path to provide a single-pass viewing system such that the spatial light modulator acts as an illumination mask such that illumination light is transmitted substantially only to light guide cores of light guides that correspond to on-pixels of the spatial light modulator.

46. (Original) The method of claim 38 wherein the method comprises transmitting the light past the spatial light modulator in both an illumination light path and a detection light path to provide a double-pass viewing system, such that the

spatial light modulator acts as an illumination mask such that illumination light is transmitted substantially only to corresponding light guides and as a detection mask that substantially prevents light from light guides other than corresponding light guides from reaching the detector.

47. (Original) The method of claim 42 wherein the method comprises mapping pixels of the spatial light modulator to corresponding cores of corresponding light guides in the light guide bundle to provide a map comprising corresponding pixels and non-corresponding pixels.

48. (New) The method of claim 36 wherein the method comprises selecting the selected corresponding pixels that are set to an on-state such that light emanating from the distal end of a first light guide corresponding to a first selected corresponding pixel does not substantially interfere with light emanating from the distal end of a second light guide corresponding to a second selected corresponding pixel.